

Listing of Claims

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

1. (currently amended) An image forming apparatus, comprising:

a head unit having a discharge nozzle for discharging an ink wherein the head unit discharges the ink from the discharge nozzle to print an image on a recording sheet;

a conveyance unit confronting the head unit and conveying the sheet in a movement direction to a position where the sheet confronts the head unit, the conveyance unit comprises a conveyance belt wound around at least two rollers;

a charging unit provided in the conveyance unit ~~to supply an~~ and configured to receive a first AC bias voltage and apply a charge, based on the first AC bias voltage, to a surface of the conveyance unit belt; [[and]]

a charge eliminating unit eliminating configured to receive a second AC bias voltage and eliminate charge of a printing surface of the recording sheet, the charge eliminating unit being disposed at a position on a downstream side of the charging unit in the movement direction of the conveyance unit and on an upstream side of the head unit; and

an AC bias supplying unit configured to supply said first and second AC bias voltages at selected timings;

wherein ~~the conveyance unit comprises a conveyance belt wound around at least two rollers, and~~ the charge eliminating unit is disposed on a downstream side of a position where the recording sheet is conveyed along a curvature of each of said at least two rollers by the conveyance belt, in the movement direction of the conveyance unit.

Claims 2-13 (canceled).

14. (previously presented) The image forming apparatus of claim 1, wherein the charge eliminating unit is disposed at a position near the head unit.

15. (previously presented) The image forming apparatus of claim 14, further comprising:

a sheet reversing unit reversing the recording sheet; and

a sheet separating unit separating the charge eliminating unit from the recording sheet when the conveyance unit is reversely rotated to convey the recording sheet after the image is printed on the printing surface of the recording sheet, to the sheet reversing unit.

16. (previously presented) An image forming apparatus, comprising:

a head unit having a discharge nozzle for discharging an ink wherein the head unit discharges the ink from the discharge nozzle to print an image on a recording sheet;

a conveyance unit confronting the head unit and conveying the sheet in a movement direction to a position where the sheet confronts the head unit;

a charging unit provided in the conveyance unit to supply an AC bias voltage to the conveyance unit;

a charge eliminating unit eliminating charge of a printing surface of the recording sheet, the charge eliminating unit being disposed at a position on a downstream side of the charging unit in the movement direction of the conveyance unit and on an upstream side of the head unit;

and

a voltage supplying unit supplying to the charge eliminating unit a voltage of polarity which is opposite to a charging polarity of a conveyance belt of the conveyance unit at a position where the conveyance belt confronts the charge eliminating unit,

wherein a movement distance of the conveyance unit from the charging unit to the charge eliminating unit is represented by a distance that is obtained by subtracting $(1/2)X$ from an integral multiple of X where X denotes a charging period length from a positively charged portion of the conveyance unit to a negatively charged portion of the conveyance unit.

17. (previously presented) The image forming apparatus of claim 16, further comprising a control unit controlling the voltage supplying unit so that no voltage is supplied to the charging unit and the charge eliminating unit when movement of the conveyance unit is stopped.

18. (previously presented) The image forming apparatus of claim 16, further comprising a control unit controlling the voltage supplying unit to vary the voltage supplied to the charge eliminating unit, depending on a kind of the recording sheet.

19. (previously presented) The image forming apparatus of claim 16, wherein the charge eliminating unit is disposed at a position near the head unit.

20. (previously presented) The image forming apparatus of claim 19, further comprising:

a sheet reversing unit reversing the recording sheet; and

a sheet separating unit separating the charge eliminating unit from the recording sheet when the conveyance unit is reversely rotated to convey the recording sheet after the image is printed on the printing surface of the recording sheet, to the sheet reversing unit.

21. (previously presented) The image forming apparatus of claim 16, wherein the charging unit and the charge eliminating unit are connected to the voltage supplying unit, and a bias voltage of same polarity is supplied to the charging unit and the charge eliminating unit at a time, respectively.

22. (previously presented) An image forming apparatus, comprising:

a head unit having a discharge nozzle for discharging an ink wherein the head unit discharges the ink from the discharge nozzle to print an image on a recording sheet;

a conveyance unit confronting the head unit and conveying the sheet in a movement direction to a position where the sheet confronts the head unit;

a charging unit provided in the conveyance unit to supply an AC bias voltage to the conveyance belt;

a charge eliminating unit eliminating charge of a printing surface of the recording sheet, the charge eliminating unit being disposed at a position on a downstream side of the charging unit in the movement direction of the conveyance unit and on an upstream side of the head unit; and

a heating unit heating the recording sheet, the heating unit being disposed at a position on an upstream side of the charge eliminating unit in the movement direction of the conveyance unit.

23. (new) The image forming apparatus of claim 16, wherein the charging period length is less than or equal to 40mm.